

SONY®

CAMERA ADAPTOR

CA-553

MAINTENANCE MANUAL

1st Edition

Serial No. 10001 and Higher

警告

このマニュアルは、サービス専用です。

お客様が、このマニュアルに記載された設置や保守、点検、修理など行くと感電や火災、人身事故につながる可能性があります。

危険をさけるため、サービストレーニングを受けた技術者のみご使用ください。

WARNING

This manual is intended for qualified service personnel only.

To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

WARNUNG

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.

Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegeben Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

AVERTISSEMENT

Ce manuel est destiné uniquement aux personnes compétentes en charge de l'entretien. Afin de réduire les risques de décharge électrique, d'incendie ou de blessure n'effectuer que les réparations indiquées dans le mode d'emploi à moins d'être qualifié pour en effectuer d'autres. Pour toute réparation faire appel à une personne compétente uniquement.

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Manual Structure

Purpose of this manual

This manual is maintenance manual of Camera Adaptor CA-553.
This manual describes the information items (parts lists, block diagram, schematic diagram, board layouts, etc.) that premise the service based on the component parts.

Contents

The following is a summary of all the sections for understanding the contents of this manual.

Section 1 Service Overview

Explains the connection input/output signals, how to check voltages, connection, and precaution on replacement of VTR connector.

Section 2 Spare Parts

Describes the exploded view for the mechanical parts, the electrical parts lists and the accessories list in this unit.

Section 3 Semiconductor Pin Assignments

Describes the pin assignments and the function explanation in this unit.

Section 4 Block Diagram

Describes the overall block diagram.

Section 5 Schematic Diagram & Board Layouts

Describes the schematic diagram and the board layouts.

Relative Manual

Besides this “Maintenance Manual”, the following manual is available for this unit.

- **Operation Manual (Supplied with this unit.)**

This manual is necessary for application and operation of this unit.

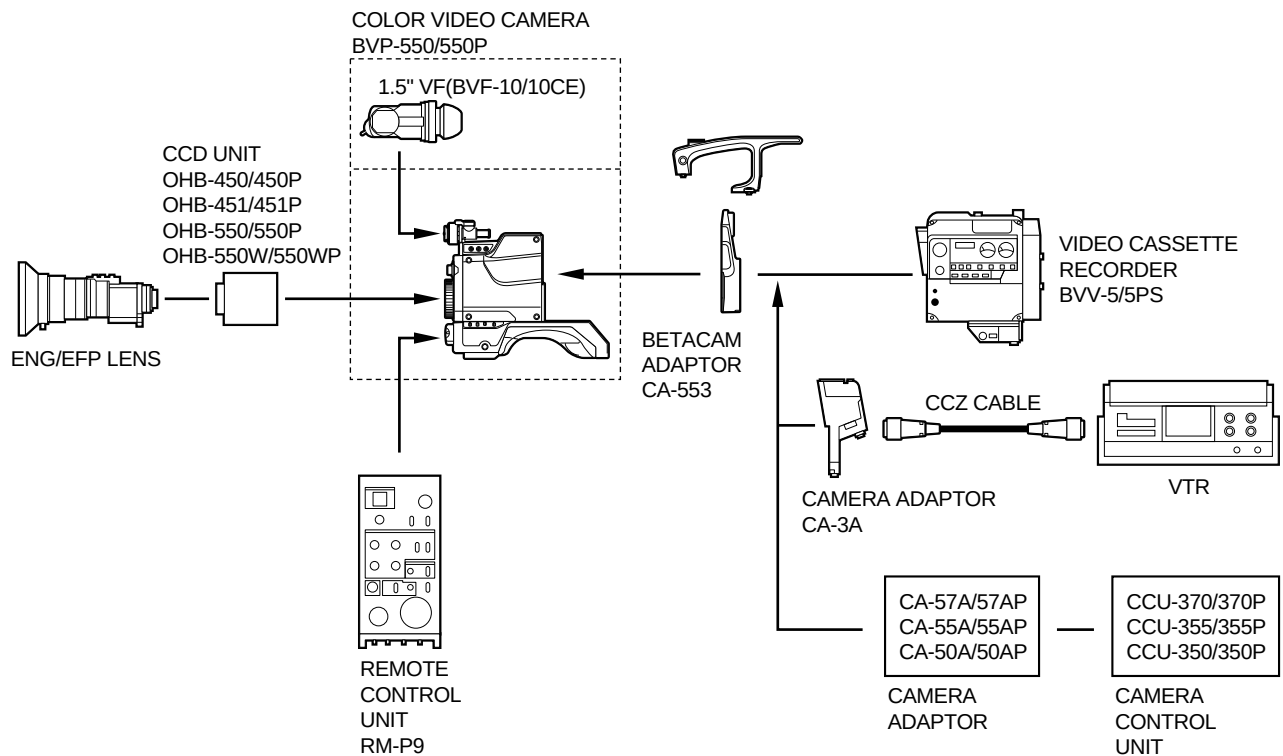
Section 1

Service Overview

1-1. Supplied Accessories

- Dust Cap 50P(1pc) :Sony Part No. 3-173-378-01
- Handle Assembly(1pc) :Sony Part No. X-3678-457-1
- Operation Manual(1pc)
- Maintenance Manual(1pc)

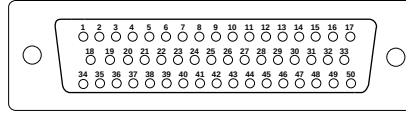
1-2. Connection



1-3. Connection Input/Output Signals

The main connector input/output signals are as follows:

VTR(50P,MALE)

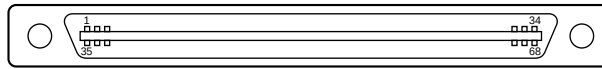


(EXTERNAL VIEW)

* : In connection with CCU ** : In connection with VTR

No.	SIGNAL	SPECIFICATIONS
1	GEN LOCK IN (X)	VBS 1 V p-p, $Z_i = 1 \text{ k}\Omega$
2	GEN LOCK IN (G)	
3	+8.8 V OUT	REG (+8.8 V)
4	−5.0 V OUT	REG (−5.0 V)
5	UNREG (GND)	GND for UNREG
6	UNREG (GND)	
7	R VIDEO OUT (X)	V 0.7 V p-p, $Z_o = 75 \Omega$
8	G VIDEO OUT (X)	
9	B VIDEO OUT (X)	
10	RGB VIDEO OUT (G)	GND for R/G/B VIDEO
11	(Spare)	
12	(Spare)	
13	(Spare)	
14	CA(CONT/DATA)IN/OUT	Serial data for camera control
15	MIC OUT (G)	$Z_o \leq 600 \Omega$, −60 dBm balanced
16	MIC OUT (X)	
17	MIC OUT (Y)	
18	RET VIDEO IN (X)	V 0.7 V p-p, $Z_i = 1 \text{ k}\Omega$
19	RET VIDEO IN (G)	
20	AUDIO IN	−15 dBs at 0VU
21	(Spare)	
22	TAPE IND 2 IN	ON:+4.5 V, OFF:GND or OPEN
23	TAPE IND 1 IN	
24	REC ALARM IN	ON:+5 V, OFF:+2.5 V or 0 V $Z_i \geq 20 \text{ k}\Omega$ *Note 2
25	BATT IND IN	$Z_i = 300 \Omega$ *Note 1

No.	SIGNAL	SPECIFICATIONS
26	PB REF IN	PB:+4.5 V, CAM:0 V or OPEN
27	VTR START/STOP OUT	$Z_o \leq 10 \text{ k}\Omega$
28	(Spare)	
29	R-Y VIDEO OUT (X)	700 mV p-p, with sync 350 mV*
30	R-Y VIDEO OUT (G)	756 mV p-p (J) 700 mV p-p (UC) 525 mV p-p (CE) } **
31	AUDIO CH 1 CONT OUT	0 V (0 dB) to 7 V (−50 dB)
32	VTR SAVE OUT	SAVE:+4.5 V, STAND BY:0 V $Z_o \leq 10 \text{ k}\Omega$
33	NC	No connection
34	SYNC (VTR) OUT	5 V p-p, Negative pulse $Z_o \leq 100 \Omega$
35	(Spare)	
36	NC	No connection
37	CF OUT	Color framing
38	RET VIDEO ENABLE OUT	ENABLE:0 V DISABLE:+5 V or OPEN
39	UNREG IN	+10.5 to 17 V
40	UNREG IN	
41	Y VIDEO OUT (X)	VS 1.0 V p-p, $Z_o = 75 \Omega$
42	Y VIDEO OUT (G)	
43	VBS OUT (X)	VBS 1.0 V p-p, $Z_o = 75 \Omega$
44	VBS OUT (G)	
45	(Spare)	
46	(Spare)	
47	(Spare)	
48	(Spare)	
49	B-Y VIDEO OUT (X)	700 mV p-p, with sample 350 mV*
50	B-Y VIDEO OUT (G)	756 mV p-p (J) 700 mV p-p (UC) 525 mV p-p (CE) } **

CAMERA(68P, MALE)

(EXTERNAL VIEW)

* : In connection with CCU ** : In connection with VTR

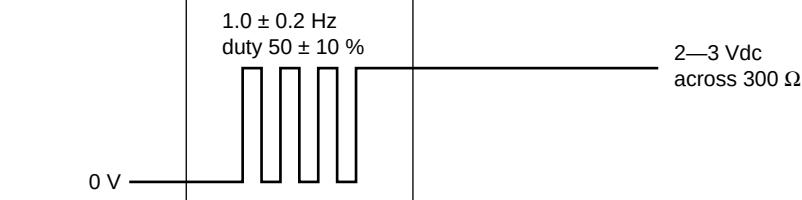
(0 dBu = 0.775 Vrms)

No.	SIGNAL	SPECIFICATIONS
1	UNREG GND	GND for UNREG
2	UNREG GND	GND for UNREG
3	VF UNREG GND	GND for VF UNREG
4	LENS UNREG GND	GND for LENS UNREG
5	UNREG OUT	10.5 V to 17 V
6	UNREG OUT	10.5 V to 17 V
7	VF UNREG OUT	10.5 V to 17 V
8	LENS UNREG OUT	10.5 V to 17 V
9	R IN(X)	700 mV p-p $\pm$ 2%, DC 0 $\pm$ 200 mV, Zi $\geq$ 10 k Ω
10	B IN(X)	700 mV p-p $\pm$ 2%, DC 0 $\pm$ 200 mV, Zi $\geq$ 10 k Ω
11	VBS IN(G)	GND for VBS VIDEO
12	Y IN(X)	VS 1.0 V p-p, Zi = 1 k Ω *
13	B-Y IN(X)	700 mV p-p, with sample 350 mV* 756 mV p-p (J) 700 mV p-p (UC) 525 mV p-p (CE) $\left. \vphantom{\begin{matrix} 756 \\ 700 \\ 525 \end{matrix}} \right\}^{**}$
14	NC	No connection
15	NC	No connection
16	VBS GENLOCK OUT(X)	1.0 V p-p $\pm$ 6 dB, Zo = 75 Ω
17	RET VIDEO OUT(G)	GND for RET VIDEO
18	NC	No connection
19	BATTERY ALARM OUT	Zo = 300 Ω
20	NC	No connection
21	AUDIO CH 1 CONT IN	0 V(0 dB) to 7 V(–50 dB or less)
22	MIC 1 IN(Y)	Zi $\geq$ 600 Ω , –60 dBu balanced
23	NC	No connection
24	NC	No connection
25	TAPE REM OUT	*Note 3
26	VTR SYNC IN	+5.0 V p-p Negative pulse, Zi $\leq$ 100 Ω
27	RET EN IN	ENABLE; 0 V, DISABLE; +5 V or OPEN
28	PB REF OUT	PB; +4.5 V, CAM; 0 V or OPEN
29	NC	No connection
30	ANALOG GND	GND for analog signals
31	HD IN	3 V p-p
32	NC	No connection
33	NC	No connection
34	NC	No connection

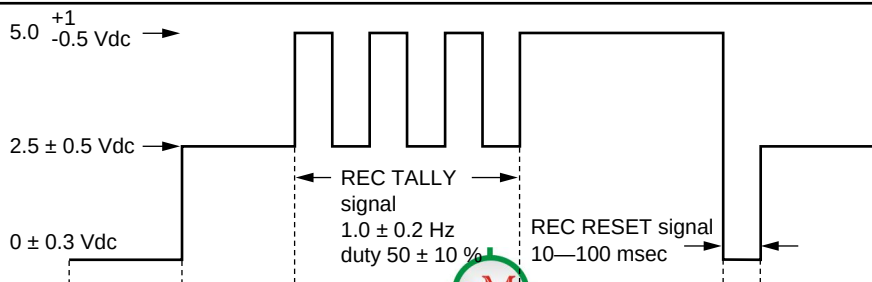
No.	SIGNAL	SPECIFICATIONS
35	UNREG GND	GND for UNREG
36	UNREG GND	GND for UNREG
37	VF UNREG GND	GND for VF UNREG
38	LENS UNREG GND	GND for LENS UNREG
39	UNREG OUT	10.5 V to 17 V
40	UNREG OUT	10.5 V to 17 V
41	VF UNREG OUT	10.5 V to 17 V
42	LENS UNREG OUT	10.5 V to 17 V
43	G IN(X)	700 mV p-p $\pm$ 2%, DC 0 $\pm$ 200 mV, Zi $\geq$ 10 k Ω
44	R/G/B GND	GND for R/G/B VIDEO
45	VBS IN(X)	1.0 V p-p $\pm$ 10%, Zi = 75 Ω
46	R-Y IN(X)	700 mV p-p, with sync 350 mV* 756 mV p-p (J) 700 mV p-p (UC) 525 mV p-p (CE) $\left. \vphantom{\begin{matrix} 756 \\ 700 \\ 525 \end{matrix}} \right\}^{**}$
47	Y/R-Y/B-Y GND	GND for Y/R-Y/B-Y
48	NC	No connection
49	NC	No connection
50	VBS GENLOCK OUT(G)	GND for GENLOCK
51	RET VIDEO OUT(X)	1.0 V p-p, Zo = 75 Ω
52	NC	No connection
53	VTR START/STOP IN	Zi $\leq$ 10 k Ω
54	NC	No connection
55	MIC 1 IN(G)	GND for CAM MIC
56	MIC 1 IN(X)	Zi $\geq$ 600 Ω , –60 dBu balanced
57	NC	No connection
58	NC	No connection
59	AUDIO LEVEL OUT	–15 dBs at 0VU
60	NC	No connection
61	V RESET OUT/CF IN	V Reset; 0 V to +5 V, CF; 0 V to –5 V
62	REC ALARM OUT	ON; +5 V, OFF; +2.5 V or 0 V, Zo $\geq$ 20 k Ω
63	VTR SAVE IN	SAVE; +4.5 V, STANDBY; 0 V, Zi $\leq$ 10 k Ω
64	NC	No connection
65	CA(CONT/DATA)IN OUT	Serial data for camera control
66	NC	No connection
67	NC	No connection
68	NC	No connection

Note 1 : Specifications of BATT IND Signal

VTR has a battery voltage detection and warning signal generation circuits and it sends the signal shown below to the camera.

Battery Terminal Voltage (VTR internal battery)	12.0—11.1 Vdc	11.1—10.8 Vdc	10.8 Vdc or less
Input Signal at Pin 25			
LED on Viewfinder	Stays out	Blinks at 1 Hz	Lights up

Note 2 : Specifications of REC ALARM Signal

Input Signal at Pin 24						
VTR Action	Power OFF	Power ON	When VTR changes from POWER SAVE to REC START mode, or when the servo is lost	When VTR changes from STANDBY to REC START mode, or in REC mode	At the end of tape or When VTR is put into STOP mode by itself (REC RESET signal does not appear when VTR is put into STOP mode by operating the camera)	STOP mode

Note 3 : Specifications of TAPE REM Signal

Tape Remaining (VTR)		Input Signal at Pin 25	Remark
TAPE1	TAPE2		
+5 V	+5 V	+3.4 V	
+5 V	0 V	+3.1 V	G TALLY lamp lights at +3.1 V (in connection with CCU)
0 V	+5 V	+2.2 V	
0 V	0 V	0 V	

1-4. How to Check Voltage

When replace the parts on PS-393 board, perform the following check.

Connection

- Connect a CA-50A/50AP/55A/55AP/57A/57AP to the CA-553.
- Connect a BVP-550/550P to the CA-553.
- Connect a Regulated DC Power Supply to the DC IN connector of the CA-50A/50AP/55A/55AP/57A/55AP.
- Turn ON (EXT) the power switch of the CA-50A/50AP/55A/55AP/57A/57AP.
- Turn on the power switch of the BVP-550/550P.

Measure at the following point when the voltage of the Regulated DC Power Supply is set.

Measurement point :CN101-3/PS-393
GND :CN101-2/PS-393

1-4-1. 8.8 V Check

1. Set the voltage of the Regulated DC Power Supply to 12.0 ± 0.1 V dc.
Measurement point :TP2/PS-393
GND :TP3/PS-393
Specifications : 8.8 ± 0.1 V dc
2. Change the voltage of the Regulated DC Power Supply from 10.5 to 17 V dc and make sure that the specifications is met.
Measurement point :TP2/PS-393
GND :TP3/PS-393
Specifications : 8.8 ± 0.1 V dc

1-4-2. -5 V Check

1. Set the voltage of the Regulated DC Power Supply to 12.0 ± 0.1 V dc.
Measurement point :TP4/PS-393
GND :TP3/PS-393
Specifications : -5.0 ± 0.1 V dc
2. Change the voltage of the Regulated DC Power Supply from 10.5 to 17 V dc and make sure that the specifications is met.
Measurement point :TP4/PS-393
GND :TP3/PS-393
Specifications : -5.0 ± 0.1 V dc

1-4-3. Cut off Voltage Check

1. Set the voltage of the Regulated DC Power Supply to 9.0 ± 0.1 V dc.
Measurement point :TP2/PS-393
GND :TP3/PS-393
Specifications : 0 ± 0.1 V dc
2. Set the voltage of the Regulated DC Power Supply to 9.0 ± 0.1 V dc.
Measurement point :TP4/PS-393
GND :TP3/PS-393
Specifications : 0 ± 0.1 V dc

1-5. Notes on Spare Parts

1. Safety Related Components Warning

Components marked $\triangle$ are critical to safe operation. Therefore, specified parts should be used in the case of replacement.

2. Standardization of Parts

Some repair parts supplied by Sony differ from those used for the unit. These are because of parts commonality and improvement.
Parts list has the present standardized repair parts.

3. Stock of Parts

Parts marked with “o” at SP(Supply Code) column of the spare parts list may be not stocked. Therefore, the delivery date will be delayed.

4. Units Representation

The following represented units are changed or omitted in writing.

Units		Representation
Capacitance	μ F	uF
Inductance	μ H	uH
Resistance	Ω	Abbreviation
Temperature	$^{\circ}$ C	XXX-DEG-C

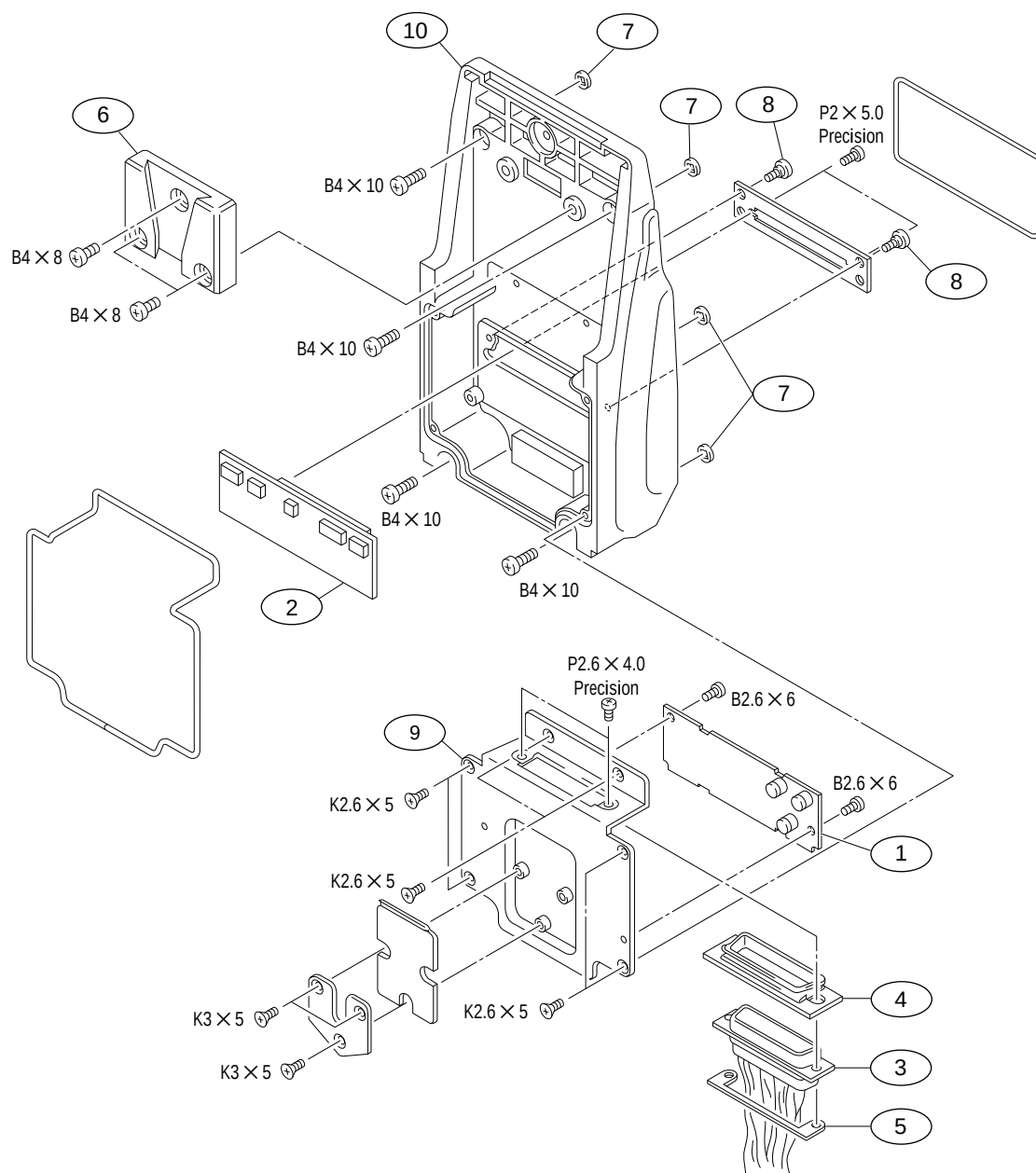
1-6. Precaution on Replacement of VTR Connector (50P Connector)

The VTR connector (50 pin connector) is attached using a high-precision special tool (CV positioning) so as to keep the accurate positioning relation with VTR mount (C shoe) and to dock with any of BVV-5/5PS.
Consult the Sony's servicing personnel when replacing the VTR connector.

Section 2

Spare Parts

2-1. Exploded View



No.	Part No.	SP Description
1	A-8269-818-A	o MOUNTED CIRCUIT BOARD, PS-393
2	A-8269-820-A	o MOUNTED CIRCUIT BOARD, CN-1230
3	1-955-215-11	o HARNESS, MAIN
4	3-173-270-01	o PACKING (50P), DROP PROTECTION
5	3-675-929-00	o NUT (50P), PLATE

No.	Part No.	SP Description
6	3-675-958-02	o SHOE, C
7	3-687-116-01	o WASHER (4), STOPPER
8	3-692-174-02	s SCREW, FLOATING
9	3-692-789-01	o COVER
10	3-692-790-01	o CASE

2-2. Electrical Parts List

----- CN-1230 BOARD -----

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-8269-820-A	o MOUNTED CIRCUIT BOARD, CN-1230
C1	1-163-251-11	s CERAMIC, CHIP 100PF 5% 50V
CN202	1-764-099-11	s CONNECTOR, PC BOARD 14P, MALE
CN203	1-764-095-11	o CONNECTOR, PC BOARD 10P, MALE
CN204	1-764-092-11	o CONNECTOR, PC BOARD 7P, MALE
CN205	1-764-090-11	o CONNECTOR, PC BOARD 5P, MALE
CN206	1-764-091-11	o CONNECTOR, PC BOARD 6P, MALE
CN207	1-764-089-11	o CONNECTOR, PC BOARD 4P, MALE
CN208	1-764-088-11	o CONNECTOR, PC BOARD 3P, MALE
CN209	1-764-093-21	o CONNECTOR, PC BOARD 8P, MALE
D1	8-719-104-34	s DIODE 1S2835
D2	8-719-104-34	s DIODE 1S2835
IC1	8-759-082-61	s IC TC4W53FU
R1	1-208-806-11	s METAL, CHIP 10K 0.5% 1/10W
R2	1-216-682-11	s METAL, CHIP 20K 0.5% 1/10W
R3	1-216-682-11	s METAL, CHIP 20K 0.5% 1/10W
R4	1-208-806-11	s METAL, CHIP 10K 0.5% 1/10W
R5	1-216-651-11	s METAL, CHIP 1K 0.5% 1/10W

----- PS-393 BOARD -----

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-8269-818-A	o MOUNTED CIRCUIT BOARD, PS-393
C1	1-104-912-11	s TANTALUM, CHIP 3.3uF 20% 16V
C2	1-104-912-11	s TANTALUM, CHIP 3.3uF 20% 16V
C3	1-126-397-11	s ELECT, CHIP 33uF 20% 25V
C4	1-163-038-00	s CERAMIC 0.1uF 25V
C5	1-104-823-11	s TANTALUM, CHIP 47uF 20% 16V
C6	1-163-038-00	s CERAMIC 0.1uF 25V
C7	1-107-689-21	s TANTALUM, CHIP 1uF 20% 35V
C8	1-107-689-21	s TANTALUM, CHIP 1uF 20% 35V
C9	1-104-823-11	s TANTALUM, CHIP 47uF 20% 16V
C10	1-163-038-00	s CERAMIC 0.1uF 25V
C11	1-126-397-11	s ELECT, CHIP 33uF 20% 25V
C12	1-163-038-00	s CERAMIC 0.1uF 25V
C13	1-104-823-11	s TANTALUM, CHIP 47uF 20% 16V
C14	1-163-038-00	s CERAMIC 0.1uF 25V
C15	1-107-689-21	s TANTALUM, CHIP 1uF 20% 35V
C16	1-104-823-11	s TANTALUM, CHIP 47uF 20% 16V
C17	1-163-038-00	s CERAMIC 0.1uF 25V
C19	1-104-919-11	s TANTALUM, CHIP 10uF 20% 25V
C20	1-104-914-11	s TANTALUM, CHIP 22uF 20% 16V
C21	1-163-125-00	s CERAMIC, CHIP 220PF 5% 50V
C22	1-104-912-11	s TANTALUM, CHIP 3.3uF 20% 16V
C23	1-104-912-11	s TANTALUM, CHIP 3.3uF 20% 16V
C24	1-163-038-00	s CERAMIC 0.1uF 25V
C25	1-163-038-00	s CERAMIC 0.1uF 25V
C26	1-163-038-00	s CERAMIC 0.1uF 25V
C27	1-126-397-11	s ELECT, CHIP 33uF 20% 25V
C28	1-104-914-11	s TANTALUM 22uF 20% 16V
C29	1-127-518-11	s ELECT 100 20% 16V
C30	1-127-513-00	s ELECT 15uF 20% 25V
C31	1-127-513-00	s ELECT 15uF 20% 25V
CN101	1-764-092-11	o CONNECTOR, PC BOARD 7P, MALE
D1	8-719-104-34	s DIODE 1S2835
D2	8-719-105-57	s DIODE RD3.9M-B1
D4	8-719-989-76	s DIODE SC802-04
D5	8-719-157-42	s DIODE RD8.2M-B
D6	8-719-989-76	s DIODE SC802-04
D7	8-719-106-53	s DIODE RD10M-B2
D8	8-719-157-23	s DIODE RD4.7M-B
D9	8-719-104-34	s DIODE 1S2835
D10	8-719-104-34	s DIODE 1S2835
D11	8-719-104-34	s DIODE 1S2835
IC1	8-759-082-58	s IC TC7W08FU
IC2	8-759-906-53	s IC TL062CPS
IC3	8-759-929-21	s IC TLC27L2CPS
IC4	8-759-908-95	s IC TL1451CNS
IC5	8-759-066-68	s IC REF-03GS
L1	1-424-643-11	s COIL, CHOKE 10UH
L2	1-411-775-11	s COIL, CHOKE 47UH
L3	1-411-775-11	s COIL, CHOKE 47UH
Q1	8-729-120-28	s TRANSISTOR 2SC1623-L5L6
Q2	8-729-216-22	s TRANSISTOR 2SA1162
Q3	8-729-322-23	s TRANSISTOR 2SJ120S
Q4	8-729-820-86	s TRANSISTOR 2SB1121-ST
Q5	8-729-120-28	s TRANSISTOR 2SC1623-L5L6
Q6	8-729-216-22	s TRANSISTOR 2SA1162
Q7	8-729-322-23	s TRANSISTOR 2SJ120S

(PS-393 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
Q8	8-729-807-16	s	TRANSISTOR 2SD1621
Q9	8-729-216-22	s	TRANSISTOR 2SA1162
Q10	8-729-216-22	s	TRANSISTOR 2SA1162
R1	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R2	1-208-806-11	s	METAL, CHIP 10K 0.5% 1/10W
R3	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R4	1-216-660-11	s	METAL, CHIP 2.4K 0.5% 1/10W
R5	1-216-667-11	s	METAL, CHIP 4.7K 0.5% 1/10W
R6	1-216-611-11	s	METAL, CHIP 22 0.5% 1/10W
R7	1-216-678-11	s	METAL, CHIP 13K 0.5% 1/10W
R8	1-208-789-11	s	METAL, CHIP 2K 0.5% 1/10W
R9	1-208-806-11	s	METAL, CHIP 10K 0.5% 1/10W
R10	1-216-684-11	s	METAL, CHIP 24K 0.5% 1/10W
R11	1-208-784-11	s	METAL, CHIP 1.2K 0.5% 1/10W
R12	1-216-667-11	s	METAL, CHIP 4.7K 0.5% 1/10W
R13	1-216-611-11	s	METAL, CHIP 22 0.5% 1/10W
R14	1-208-806-11	s	METAL, CHIP 10K 0.5% 1/10W
R15	1-216-682-11	s	METAL, CHIP 20K 0.5% 1/10W
R17	1-208-806-11	s	METAL, CHIP 10K 0.5% 1/10W
R18	1-208-806-11	s	METAL, CHIP 10K 0.5% 1/10W
R19	1-208-806-11	s	METAL, CHIP 10K 0.5% 1/10W
R20	1-208-806-11	s	METAL, CHIP 10K 0.5% 1/10W
R21	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R22	1-216-696-11	s	METAL, CHIP 75K 0.5% 1/10W
R23	1-216-671-11	s	METAL, CHIP 6.8K 0.5% 1/10W
R24	1-208-822-11	s	METAL, CHIP 47K 0.5% 1/10W
R25	1-208-828-11	s	METAL, CHIP 82K 0.5% 1/10W
R26	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R27	1-216-660-11	s	METAL, CHIP 2.4K 0.5% 1/10W
R28	1-216-678-11	s	METAL, CHIP 13K 0.5% 1/10W
R29	1-216-660-11	s	METAL, CHIP 2.4K 0.5% 1/10W
R30	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R31	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R32	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R33	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R34	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R35	1-216-611-11	s	METAL, CHIP 22 0.5% 1/10W

FRAME

Ref. No. or Q'ty	Part No.	SP	Description
HARNESS (MAIN)			
1pc	1-955-215-11	o	HARNESS, MAIN
1pc	1-563-905-11	o	HOUSING, D02 M 50P
64pcs	1-695-215-11	o	TERMINAL, SOLDERLESS 1P
2pcs	1-695-231-11	o	CONNECTOR, PC BOARD 10P, MALE
1pc	1-695-891-11	o	HOUSING 10P
1pc	1-764-193-11	o	HOUSING 3P
1pc	1-764-194-11	o	HOUSING 4P
1pc	1-764-195-11	o	HOUSING 5P
1pc	1-764-196-11	o	HOUSING 8P
1pc	1-764-200-11	o	HOUSING 14P
1pc	1-764-212-11	o	CONNECTOR, BOARD TO BOARD 13P, FEMALE

2-3. Supplied Accessories

Ref. No.

or Q'ty Part No. SP Description

1pc 3-173-378-01 o CAP (50P), DUST

HANDLE ASSY

1pc X-3678-457-3 o HANDLE ASSY

2pcs 3-687-116-01 o WASHER (4), STOPPER

4pcs 3-689-039-11 s SCREW M2X6, SMALL

1pc 3-701-442-21 s WASHER, 4.5

2pcs 7-682-562-09 s SCREW +B 4X10

1pc 7-682-576-09 s SCREW +B 5X12

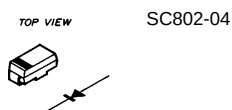
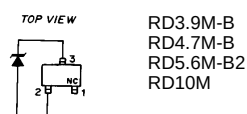
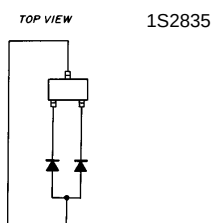
Section 3

Semiconductor Pin Assignments

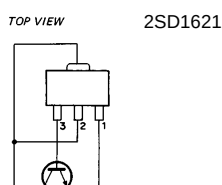
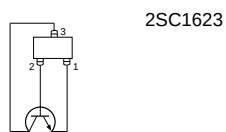
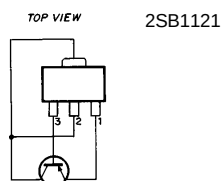
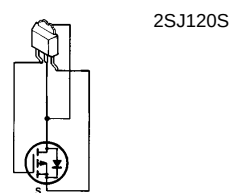
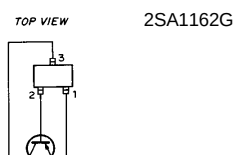
ここに記載されている半導体は、それぞれの機能を等価的に表したものです。なお、互換性のない型名を併記していることがありますので、部品を交換するときは、Spare Partsの章を参照してください。
等価回路はI Cメーカーのデータブックに従いました。

Semiconductors of which functions are equivalent are described here. For parts replacement, refer to the section of Spare Parts in this manual. The circuit diagram of each IC is obtained from the IC data book published by the manufacturer.

DIODE



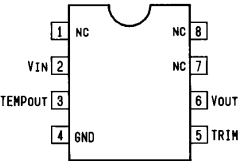
TRANSISTOR



IC

REF-03GS(PMI)

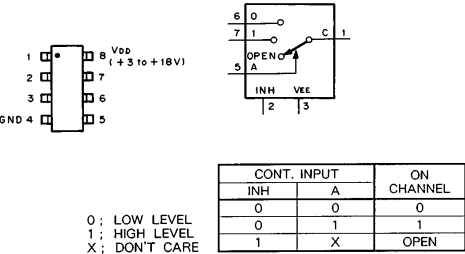
REFERENCE/TEMPERATURE TRANSDUCER
- TOP VIEW -



VIN : INPUT VOLTAGE(+4.5Vto+33V)
TEMPOUT : TEMPERATURE TRANSDUCER
VOLTAGE OUTPUT
TRIMIN : OUTPUT SIGNAL TRIMMING
VOUT : OUTPUT VOLTAGE(+2.5V)

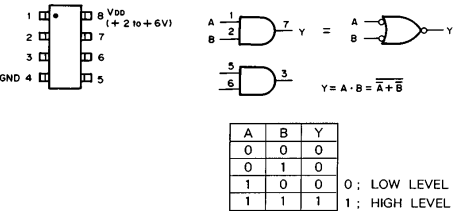
TC4W53FU (TOSHIBA) CHIP PACKAGE

C-MOS 2-CHANNEL MULTIPLEXER/DEMULTIPLEXER
- TOP VIEW -



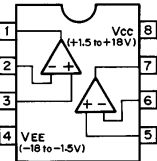
TC7W08FU(TOSHIBA)CHIP PACKAGE

C-MOS DUAL 2-INPUT AND GATE
- TOP VIEW -



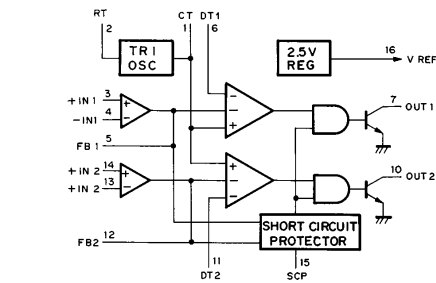
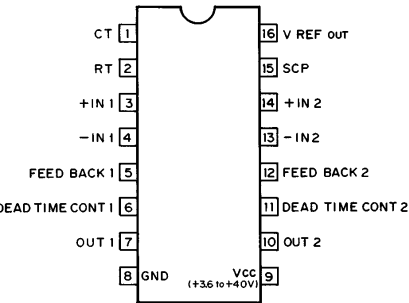
TL062CPS(TI)FLAT PACKAGE

OPERATIONAL AMPLIFIER(J FET INPUT)
- TOP VIEW -



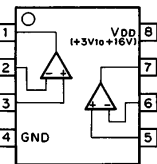
TL1451ACN(TI)

DUAL PWM POWER CONTROLLER
- TOP VIEW -



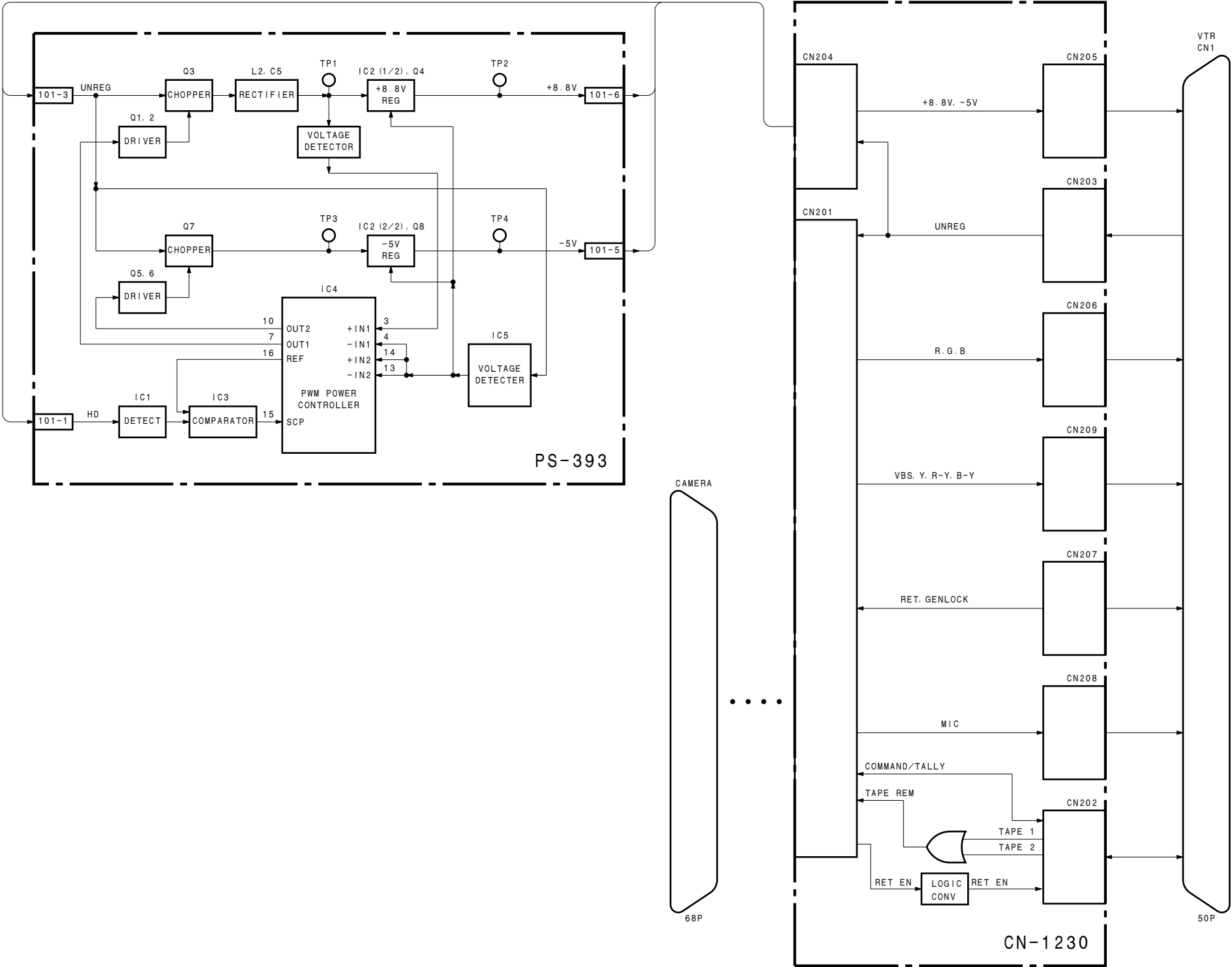
TLC27L2CPS(TI)FLAT PACKAGE

OPERATIONAL AMPLIFIER
- TOP VIEW -



Section 4

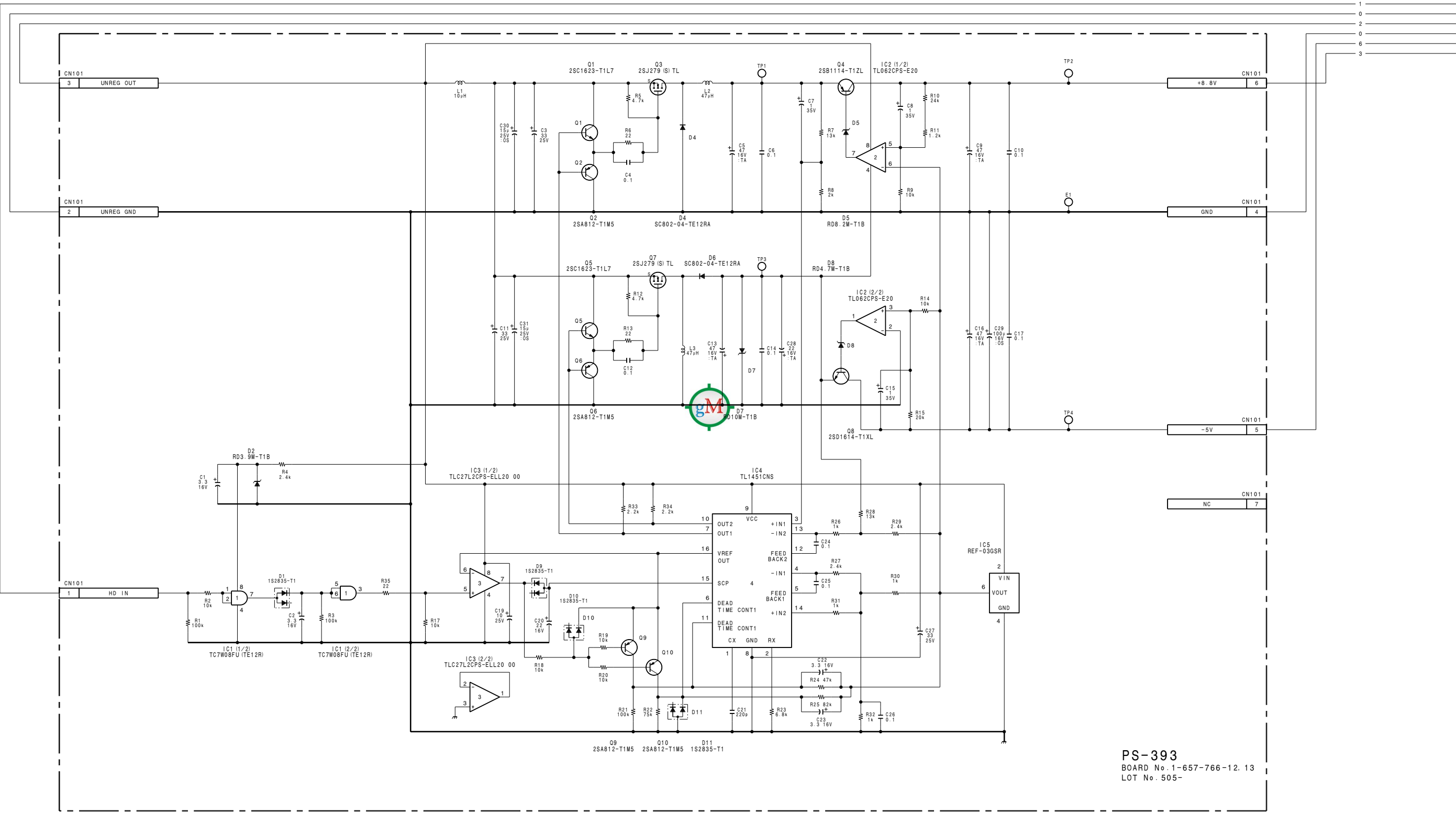
Block Diagram

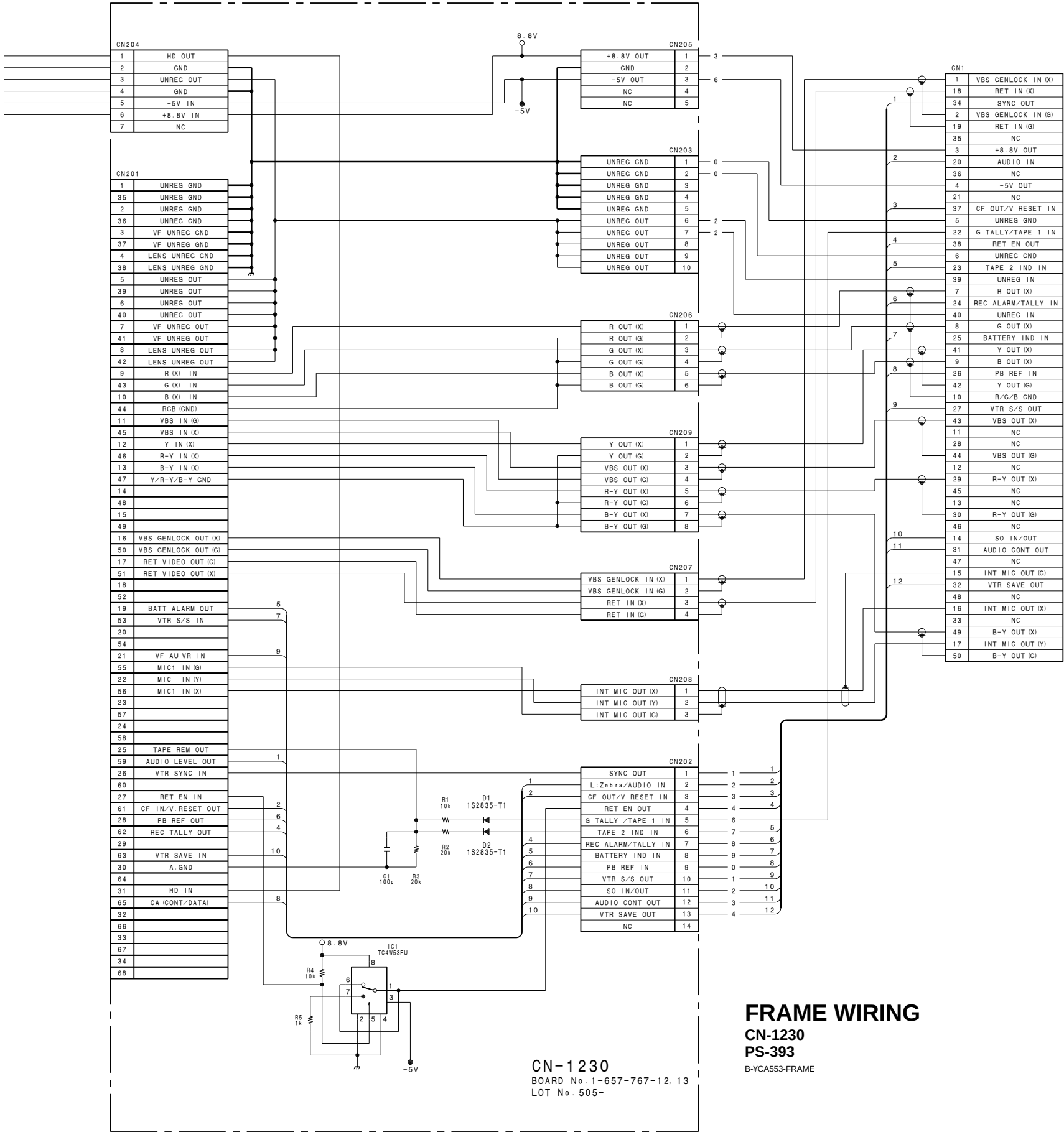


Overall

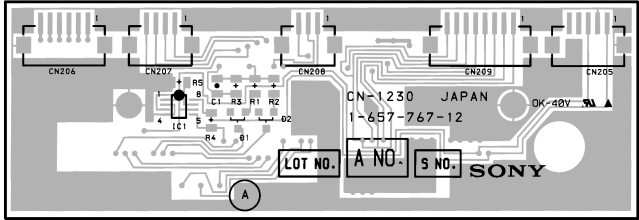
Section 5
Schematic Diagram & Board Layouts

1 Frame Wiring

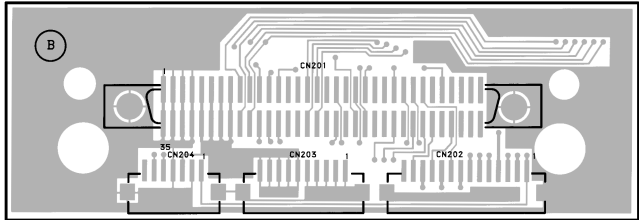




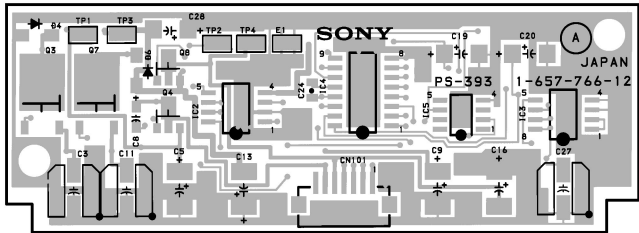
Board Layouts



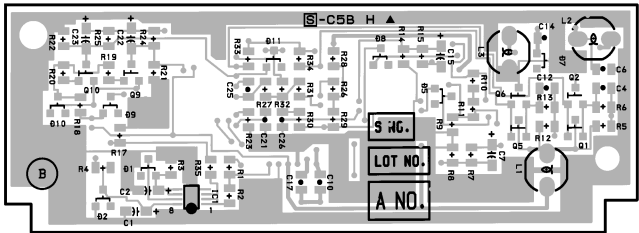
CN-1230 -COMPONENT SIDE-
1-657-767-12, 13



CN-1230 -SOLDERING SIDE-
1-657-767-12, 13



PS-393 -COMPONENT SIDE-
1-657-766-12, 13



PS-393 -SOLDERING SIDE-
1-657-766-12, 13

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